APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,745	01/19/2005	Michael Richard Richardson	19939 (XA2019)	7026

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EXAMINER
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ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
04/13/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED <u>23 March 2009</u> FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

   a) ☒ The period for reply expires <u>3</u> months from the mailing date of the final rejection.

   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

<u>NOTICE OF APPEAL</u>

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

<u>AMENDMENTS</u>

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will <u>not</u> be entered because

   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ They raise the issue of new matter (see NOTE below);

   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

<u>AFFIDAVIT OR OTHER EVIDENCE</u>

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will <u>not</u> be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will <u>not</u> be entered because the affidavit or other evidence failed to overcome <u>all</u> rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

<u>REQUEST FOR RECONSIDERATION/OTHER</u>

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
    <u>SEE CONTINUATION SHEET</u>.

12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____

13. ☐ Other: _____.

/Shuwang Liu/ Supervisory Patent Examiner, Art Unit 2611	/Gina McKie/ Examiner, Art Unit 2611

The prior art of record, Henriksson (US 2004/0085891 A1) discloses a method for digitally processing a signal in a frequency domain containing regular or quasi-regular elements of unwanted signal. The digital processing can be shown from figure 2, analog-to-digital conversion block 201. In figure 2, block 202, Henriksson discloses detecting the presence of impulse noise in the received analog-to-digital converted signal. Therefore, the signal contains regular or quasi-regular elements of unwanted signal (both undefined in the claims of the instant application and, therefore, open to a broad, reasonable interpretation by one of ordinary skill in the art). Henrikson discloses in para. [0038] that the received signal is of the OFDM variety and further discloses an FFT operation in figure 2, block 206 which would indicate "digital processing a signal in a frequency domain." Therefore, Henriksson discloses, "a method for digitally processing a signal in a frequency domain containing regular or quasi-regular elements of unwanted signal," as claimed in the preamble of claim 1 of the instant application.

Henriksson discloses establishing timing characteristics of the unwanted signal elements in a portion of said signal. In the case of Henriksson, the "unwanted signal elements" is impulse noise. Henriksson discloses, in para. [0039], calculating the combined power of a number of samples within a sliding window and comparing it with a reference value. When the difference between the calculated combined power and the reference value exceeds a threshold, impulse noise has been detected. One of ordinary skill in the art would associate a sliding window as a time shifting element that establishes timing characteristics because a sliding window typically has a start time and an end time. So, within the start time and the end time of the sliding window, the impulse noise, i.e. unwanted signal elements, is detected. Therefore, Henriksson discloses, "establishing timing characteristics of the unwanted signal elements in a portion of said signal," as claimed in claim 1 of the instant application.

Henriksson discloses generating a time domain window function using said established timing characteristics. In the case of Henriksson, the time domain window function is a blanking interval. The blanking interval is defined using the position of the burst in the series of samples and its length as indicated by the detection method, i.e. timing characteristics, as disclosed by Henriksson in para. [0040]. Henriksson discloses said time domain window function (the blanking interval/window) being a sinusoidal function as shown in figure 7A and para. [0050] where Henriksson discloses a blanking window with cosine transitions. One of ordinary skill in the art would recognize that a cosine function is simply a sine function with a phase shift. Therefore, Henriksson discloses, "generating a time domain window function using said established timing characteristics, said time domain window function being a sinusoidal function (window with cosine transitions)," as claimed in claim 1 of the instant application.

Henriksson discloses the blanking interval/window encompassing the samples identified as being affected by the interference (para. [0040]) and blanking the samples within the blanking window by setting sample values to zero (para. [0048]) and, therefore, discloses, "applying the generated window function to said signal portion to selectively reduce the amplitude of said unwanted signal elements relative to other elements of said signal," as claimed in claim 1 of the instant application.

However, Henriksson does not specifically disclose wherein said sinusoidal time domain window function has a zero crossing substantially coinciding with the position of each unwanted signal element. Instead, the cosine transitions of the time domain window function of Henriksson are used to provide smooth transitions at the ends of the window in order to reduce distortion. The samples that are NOT at the ends, i.e. the zero crossing of the cosine transition, are set to zero rather than the samples at the ends of the cosine transition being set to zero, as claimed by Applicant in claim 1. Rather the samples where the cosine transition is at a maximum are set to zero. One of ordinary skill in the art would know that the claimed limitation is an obvious variant of the disclosed invention of Henriksson because the claimed limitation is simply the inverse of the invention disclosed by Henriksson. Nevertheless, the examiner submits that zeroing out burst interference using a zero crossing was well known in the art already (Gossel, U.S. Patent No. 3,876,945) and it would have been obvious to one of ordinary skill in the art to modify the invention of Henriksson as taught by Gossel.

Gossel teaches suppressing burst-type interference using zero-crossing intervals. If the bursts are shorter than each zero-crossing interval, the burst/interference is suppreeed (col. 3, lines 23-37) and, therefore, teaches, "a sinusoidal function having a zero crossing substantially coinciding with the position of each unwanted signal element." as claimed in claim 1. One of ordinary skill in the art would know that one could use the inverse of the Henrikson blanking window (where the window transitions go from a maximum to a minimum) and have the zero-crossing suppress the interference as taught by Gossel thus allowing substantial interference suppression to a theoretically optimum extent (Gossel, col. 1, lines 52-55).

Any argument not addressed in this Advisory Action has already been sufficiently addressed in a previous Action. Therefore, the examiner's position remains unchanged; there is no objection to the specification or the claims.